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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/654,165	09/01/2000	Itsuto Nakanishi	043931/0114	6017

22428 7590 05/27/2003

FOLEY AND LARDNER
SUITE 500
3000 K STREET NW
WASHINGTON, DC 20007

EXAMINER

LUK. EMMANUEL S

ART UNIT	PAPER NUMBER
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1722

DATE MAILED: 05/27/2003

12

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/654,165

Applicant(s)

NAKANISHI, ITSUTO

Examiner

Emmanuel S. Luk

Art Unit

1722

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 April 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-35 and 38-40 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 38-40 is/are allowed.
- 6) ☒ Claim(s) 1-35 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn.
2. The indicated allowability of claims 1-35 are withdrawn in view of the reference(s) McGrevy and Gellert. Rejections based on the cited reference(s) follow.

Claim Rejections - 35 USC § 102

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-4 and 27-32 are rejected under 35 U.S.C. 102(b) as being anticipated by McGrevy.

McGrevy teaches the claimed apparatus having a first array of injection nozzles (23; left side of 18 in Fig. 2), each nozzle having a melt channel and valve pin (48), a second array of injection nozzles (23, right side of 18 in Fig. 2), a melt distribution manifold between the first and second arrays of nozzles (19), a first actuating assembly comprising at least one actuator (pistons 40a, 40b) moved by pneumatic fluid (Col. 4, lines 53-59) and a common linkage element (piston units 42a-42d) that are driven by the piston and linked to all the valve pins (Col. 3, lines 61-67 and Col. 4, lines 1-5), the piston units (42a-42d) being interdigitated or nesting relationship thereby forming the common linkage. The second actuating assembly formed on the opposing side (Fig. 2). The actuator provides motive force via pneumatic fluid (Col. 4, lines 53-59) to actuate the common linkage and thereby move the valve pins of it respective array of injection

Art Unit: 1722

nozzles. The actuators are capable of independent movement from the pneumatic fluid supply thereby making the first and second arrays of nozzle move in opposite directions to close the gates of their respective injection nozzles. The actuators are located between and centrally among the nozzles that they actuate.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. Claims 1-26, 31, 32, 34 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gellert.

Gellert teaches the claimed invention with a first array and second array of injection nozzles (14, 16) having a gate (24), valve pins (22) having a rear end (64), a melt distribution manifold (20), a first actuating (44) and second actuating (66) assembly that comprises a yoke plate and engages the rear ends of the valve pins, and an

Art Unit: 1722

actuator (54) driving the yoke plates. The actuator is located to the side of the array of nozzles, thereby flanking the nozzles. The bushing seal (28) acts as guide members for the yoke plate as the pin slidingly passes through the seal.

Gellert fails to teach a single melt distribution manifold and at least one nozzle communicates with a plurality of mold cavities.

Gellert instead teaches a melt distribution manifold for each of the array of nozzles. It would have been obvious to one of ordinary skill in the art to modify Gellert with single manifold that connects to both arrays of nozzles. It is merely integrating two manifolds into one single manifold, the function of the apparatus remains the same.

7. Claim 33 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gellert as applied to claims 1-27, 31, 32, 34 and 35, and further in view of Treece et al.

Gellert fails to teach at least one nozzle connected to a plurality of molds.

Treece teaches a nozzle (48) that is connected to a plurality of molds (40).

It would have been obvious to one of ordinary skill in the art to modify Gellert with at least one nozzle connected to a plurality of molds because it allows for the apparatus to mold a plurality of products from the molds at a single time.

Response to Arguments

8. Applicant's arguments, see Amendment C, filed 4/25/03, with respect to claim 38 have been fully considered and are persuasive. The objection of claim 38 has been withdrawn.

Allowable Subject Matter

9. Claims 38-40 are allowed.

10. The following is an examiner's statement of reasons for allowance:

For claims 38-40, the prior art of record fails to teach or suggest actuators located between or centrally located in the injection nozzle, the actuator located under the manifold. The term "under" is in relation to the actuator being between the manifold and the tip of the nozzle. The orientation of the array of injection nozzles is with the manifold on top of the nozzles. Gellert and Diaz fails to teach an actuator located in between the injection nozzles for actuating the linking element, instead the actuator is located either to the side or if located centrally within the nozzles, the actuator would be positioned "above" the nozzles.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion


11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Emmanuel S. Luk whose telephone number is (703) 305-1558. The examiner can normally be reached on Monday through Friday 8 to 4.

Art Unit: 1722

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wanda L. Walker can be reached on (703) 308-0457. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0651.

E.L.
May 21, 2003


W. L. WALKER
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700